

City of Dania Beach



*2006
Annual
Drinking Water Quality Report
for the
City of Dania Beach*



City of Dania Beach
100 W. Dania Beach Blvd.
Dania Beach, FL 33004

Water Quality Report Shows Your Water is Safe

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Our water source is the Biscayne aquifer, a groundwater supply. Assessments of the potential for pollution to our wells were completed in 2004. FDEP records indicate no potential pollution sources near our wells. The assessment results are available on the DEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp. Once the water is pumped from the ground, we treat the water with a process called lime softening. This process precipitates the calcium and carbonates in the water, making it soft (see cover photo). We then filter the water to remove the remaining particulates. The water is disinfected to remove microbiological contaminants and fluoride is added to reduce dental caries. We provide water to 16,000 citizens of the City of Dania Beach.

The City of Dania Beach routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2006. Data obtained before January 1, 2006, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

Reading the Water Quality Table

Certain elements present in drinking water occur naturally in the environment, while other elements appear as a result of the water treatment process. These elements, reported in the chart below, do not exceed the maximum contaminant level established by EPA.

The Water Quality Table below shows test results that guarantee your water is safe. For more information, please call Dania Beach Water Plant, (Jim Baker) 954-924-3747

Terms and Definitions

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Lead and Copper are measured in Action Levels (AL): the concentration of a contaminant that, if exceeded, triggers treatment of other requirements that a water system must follow. 90% of water samples must have levels below AL. None of the 30 homes we tested in the year 2006 exceeded the EPA action levels for lead or copper. Dania Beach water is in compliance with EPA standards.*

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

"ND" means not detected and indicates that the substance was not found by laboratory analysis.

Parts per million (ppm) or Milligrams per liter (mg/l) – one part by weight of analyte to 1 million parts by weight of the water sample.

Parts per billion (ppb) or Micrograms per liter (µg/l) – one part by weight of analyte to 1 billion parts by weight of the water sample

Picocurie per liter (pCi/L) - measure of the radioactivity in water.

2006 Drinking Water Quality Table

| Microbiological Contaminants | | | | | | | |
|--|-----------------------------|-------------------|---|------------------|---|-------------|--|
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Highest Monthly Percentage/Number | MCLG | MCL | | Likely Source of Contamination |
| Total Coliform Bacteria | 1/06-12/06 | N | 0 | 0 | For systems collecting fewer than 40 samples per month: presence of coliform bacteria in 1 sample collected during a month. | | Naturally present in the environment |
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Total Number of Positive Samples for the Year | MCLG | MCL | | Likely Source of Contamination |
| Fecal coliform and <i>E.coli</i> | 1/06-12/06 | N | 0 | 0 | 0 | | Human and animal fecal waste |
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination |
| Radiological Contaminants | | | | | | | |
| Alpha emitters (pCi/l) | 1/05-12/05 | N | 0.9 | | 0 | 15 | Erosion of natural deposits |
| Radium 226 (pCi/L) | 1/05-12/05 | N | 1.0 | | 0 | 5 | Erosion of natural deposits |
| Radium 228 (pCi/L) | 1/05-12/05 | N | 1.0 | | 0 | 5 | Erosion of natural deposits |
| Uranium (ppb) | 3/03 | N | .75+.45 | | 0 | 30 | Erosion of natural deposits |
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination |
| Inorganic Contaminants | | | | | | | |
| Fluoride (ppm) | 1/06-12/06 | N | 0.79 | | 4 | 4.0 | Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between .7 and 1.2 ppm. |
| Antimony (ppb) | 1/06-12/06 | N | 0.77 | | 6.0 | 6.0 | Discharge from petroleum refineries. |
| Barium (ppm) | 1/06-12/06 | N | 0.0066 | | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Sodium (ppm) | 1/06-12/06 | N | 62 | | N/A | 160 | Salt water intrusion, leaching from soil |
| Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by <i>Cryptosporidium</i> and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). | | | | | | | |
| TTHMs and Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Contaminants | | | | | | | |
| <ul style="list-style-type: none"> For the following contaminants monitored under Stage 1 D/DBP regulations, the level detected is the highest annual average of the quarterly averages: Bromate, Chloramines, Chlorine, Haloacetic Acids, and/or TTHM (MCL 80 ppb). Range of Results is the range of results (lowest to highest) at the individual sampling sites. | | | | | | | |
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG or MRDLG | MCL or MRDL | Likely Source of Contamination |
| Chloramines (ppm) | 1/06-12/06 | N | 3.6 | .7-4.8 | MRDLG = 4 | MRDL = 4.0 | Water additive used to control microbes |
| Haloacetic Acids (five) (HAA5) (ppb) | 1/06-12/06 | N | 23.9 | 11.0-44.0 | NA | MCL = 60 | By-product of drinking water disinfection |
| TTHM [Total trihalomethanes] (ppb) | 1/06-12/06 | N | 39.17 | 15.8 -109.0 | NA | MCL = 80 | By-product of drinking water disinfection |

| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | AL Violation Y/N | 90th Percentile Result | No. of sampling sites exceeding the AL | MCLG | AL (Action Level) | Likely Source of Contamination |
|-------------------------------------|-----------------------------|------------------|------------------------|--|------|-------------------|--|
| Lead and Copper (Tap Water) | | | | | | | |
| * Copper (tap water) (ppm) | 7/06 | N | .038 | 0 | 1.3 | 1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| * Lead (tap water) (ppb) | 7/06 | N | 1.5 | 0 | 0 | 15 | Corrosion of household plumbing systems, erosion of natural deposits |

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- (A) *Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*
- (B) *Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.*
- (C) *Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.*
- (D) *Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.*
- (E) *Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

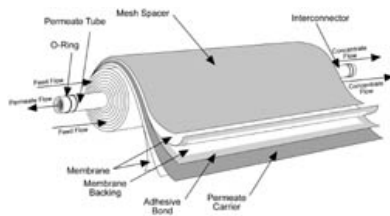
In the future we will be adding a new ground storage tank and a membrane process. The membrane process will be the next step in our continuing efforts to improve the quality of the water that our citizens drink. Below is a typical membrane system. A new ground storage tank is being constructed to increase fire flows and provide added supplies during peak periods. We will maintain our interconnect, with the City of Hollywood, in the event we suffer mechanical problems at our plant. The existing system (front cover) will be rehabilitated. New water lines are being designed as you read this, and the new water tank will be completed this year at the public works compound to insure fire flows are available.



Existing Plant to be Refurbished



Example of New Tank

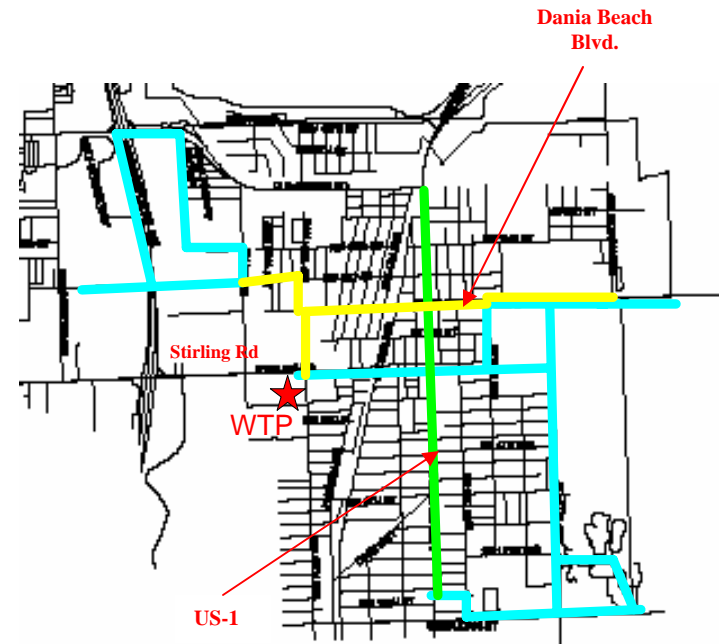


Membrane Concept



Example Membrane Skid

In the map below, the blue lines are large water lines currently in existence. The City will be constructing new, large water lines (shown in green) in the next two years. The yellow lines (20", 16", 12") are presently under construction. The new lines are intended to improve water service to the downtown area and throughout the water distribution system. The City has an ongoing program to replace water lines that are at the end of their useful life.



If you have any questions about this report or concerning your water utility, please contact Jim Baker at the water plant. We encourage our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Commission meetings. Meetings are held at City Hall on the second and fourth Tuesday of each month at 7 p.m.